# Congress of the United States
Washington, DC 20510

January 23, 2017

The Honorable James Mattis
Secretary of Defense
1000 Defense Pentagon
Washington, DC 20301-1300

Dear Secretary Mattis:

Congratulations on your confirmation to be our country's 26th Secretary of Defense.

As the founder and co-chairs of the Congressional Directed Energy Caucus, we write to express our strong support for directed energy weapon systems and to urge you and other Department officials to provide sufficient resources to accelerate the development of this technology toward acquisition programs of record. Ultimately, next generation weapon systems like directed energy will allow the United States to maintain technological superiority and stay ahead of our adversaries.

The Department has made significant advances in directed energy weapons systems since the Missile Defense Agency's Airborne Laser (ABL) demonstrated the ability of an airborne megawatt-class laser weapon to successfully track, engage, and destroy threat-representative ballistic missiles. Each military department has a marquee program in this area demonstrating military utility, including the Air Force's Counter-electronics High Power Microwave Advanced Missile Project (CHAMP), the Army's High Energy Laser Mobile Demonstrator (HELMD), and the Navy's Laser Weapon System (LaWS) that is currently deployed aboard the USS PONCE in the Persian Gulf. The Air Force Special Operations Command's ongoing efforts to integrate a high energy laser (HEL) operational prototype into an AC-130J reflects not only the maturity of HEL technology, but also the ability of directed energy systems to deliver unique capability to our Special Operators in critical mission engagements where "silent sabotage" is essential to save lives.

Despite investing billions of dollars in directed energy since the 1960s, and years of hard work by defense laboratories and industry, the Department has not fielded an operational directed energy weapon system. Too often, capable and proven directed energy weapon systems languish in perpetual research and development. As these systems reach their maturity and risk-mitigation, we must remember the old adage of not letting perfect be the enemy of good.

A major roadblock that has prevented directed energy weapons systems from crossing that threshold is the requirements-setting process, where the prevailing belief is that sufficient kinetic capabilities already exist, so an alternative is not needed, and therefore not required. This mentality, however, ignores the potential added value of directed energy systems in terms of cost effectiveness, sustainability, endless magazine, and precise targeting.

Let us be clear, directed energy weapon systems should not replace current kinetic options today or anytime soon, but we should provide our military with tactical and strategic advantages where and whenever appropriate.

We therefore request that the Department dedicate sufficient resources for developing physical prototypes of directed energy weapon systems to enable those men and women in the fight to fully

explore the doctrine, organization, training, materiel, leader development, personnel, facilities, and policy (DOTmLPF-P) necessary for the eventual use of directed energy weapon systems. The Department's Joint Fiber Laser Mission Engagement (J-FLaME) initiative to develop and assess tactics, techniques and procedures (TTPs) to integrate emerging high energy laser capabilities is an excellent example of proactive engagement to operationalize matured directed energy systems. We also encourage the Department to stay focused on fielding prototype capabilities that deliver military utility and engage the warfighters in the use of operational systems.

We also urge you to quickly implement Section 219 of the fiscal year 2017 National Defense Authorization Act, Public Law No: 114-328, by designating a senior official to have principal responsibility for the development and demonstration of directed energy weapon systems throughout the Department. Currently, the technical requirements for various service and agency directed energy programs vary broadly, which results in the pursuit of different technical approaches, a valid risk reduction strategy for directed energy across the Department. The aforementioned designated senior official will be critical to the development of the required strategic plan and roadmap for accelerating the development of this technology toward acquisition programs of record.

Next-generation weapon capabilities like directed energy are needed now and in the future to address the rising number of threats facing our country. We urge you to consider these important points during your funding deliberations for Program Objective Memorandum 2018 and beyond, as well as any consideration of an emergency supplemental in the near term, to ensure the appropriate amount of funding is allocated for directed energy weapon systems.

Again, congratulations on your confirmation. We stand ready to support you and the Department's responsibility in providing for our common defense. Thank you for your leadership and your attention to these concerns.

Sincerely,

MARTIN HEINRICH
U.S. Senator

DOUG LAMBORN
U.S. Congressman

JAMES R. LANGEVIN
U.S. Congressman